

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number  
**WO 2005/070415 A1**

- (51) International Patent Classification<sup>7</sup>: **A61K 31/40**, (74) Agent: PRICE, Vincent, Andrew; Price & Co., 6 Manor A61P 31/00, 35/00, C07D 487/04, 209/00, C07H 3/02 Court, St Georges, Mill Lane, North Chailey, East Sussex BN8 4EG (GB).
- (21) International Application Number: PCT/GB2005/000228 (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HU, IIR, IU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PI, PL, PT, RO, RU, SC, SD, SE, SG, SK, SI, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 21 January 2005 (21.01.2005)
- (25) Filing Language: English (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GI, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CI, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (30) Priority Data:  
0401239.9 21 January 2004 (21.01.2004) GB
- (71) Applicant (*for all designated States except US*): **M N L PHARMA LIMITED** [GB/GB]; Plas Gogerddan, Aberystwyth, Ceredigion SY23 3EB (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **NASH, Robert, James** [GB/GB]; Trefriw-Fach, Tyn-Y-Graig, Ystrad-Meurig, Ceredigion SY25 6AF (GB). **WATSON, Alison, Ann** [GB/GB]; Trefriw-Fach, Tyn-Y-Graig, Ystrad-Meurig, Ceredigion SY25 6AF (GB). **EVINSON, Emma, Louisa** [GB/GB]; 4 Arborfield Close, Helpston, Peterborough, Cambridgeshire PE6 7DL (GB).

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: ADJUVANT COMPOSITIONS

(57) Abstract: An adjuvant composition comprises a Th1-activating alkaloid, optionally further comprising an auxiliary adjuvant selected from a type 2 adjuvant (e.g. alum and/or MF59), a type 1 adjuvant and/or a balanced adjuvant. Vaccines comprising the adjuvant composition include nucleic acid(s) which encode one or more antigenic protein(s); protein(s) or peptide(s); glyco-protein(s); polysaccharide(s) (e.g. carbohydrate(s)); fusion protein(s); lipid(s); glycolipid(s); peptide mimic(s) of polysaccharides; carbohydrate(s) and a protein(s) in admixture; carbohydrate-protein conjugate(s); cells or extracts thereof; dead or attenuated cells, or extracts thereof; tumour cells or extracts thereof; viral particles (e.g. attenuated viral particles or viral components); allergen(s); mixtures thereof.

WO 2005/070415 A1